

REMARKS

With this Amendment, Applicant adds new claims 14-16 and amends claim 1. No new matter is added. Therefore, claims 1-16 are all the claims pending in the present application.

I. Formal Matters

Applicant thanks the Examiner for acknowledging the claim to foreign priority and for confirming that the certified copy of the priority document was received.

Applicant thanks the Examiner for acknowledging receipt of the Information Disclosure Statement filed July 16, 2001 (in the Office Action dated September 10, 2003), and for considering the references cited therein.

Applicant respectfully requests the Examiner to indicate whether the Formal Drawings filed February 2, 2001 are approved in the next communication.

II. Claim Rejections under 35 U.S.C. § 103(a)

Claims 1-13 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Leslie et al. (U.S. Patent No. 6,404,775; hereinafter Leslie) in view of Tanaka et al. (U.S. Patent No. 6,263,061; hereinafter "Tanaka") and further in view of Evans et al. (U.S. Patent No. 5,448,619; hereinafter "Evans"). Of these rejected claims, only claim 1 is independent.

Claim 1

Claim 1, as herein amended requires, *inter alia*:

Telecommunication equipment for setting up local telephone connections between at least one mobile telephone, **belonging to only a private network**, and a public network, the equipment comprising:

wherein the upstream system and the downstream system **apply the same mobile telephone standard, which is that of the public mobile telephone network**, and the equipment further comprising a service signal converter module between the upstream system and the downstream system adapted to: extract from the signaling information **specific to the mobile telephones belonging to the private network** and used to manage calls **between the terminals of the private network** and store that information in a local database.

Applicant respectfully submits that neither Leslie, Tanaka, Evans nor any combination thereof teaches, suggests, or provides the motivation for all of the features of claim 1.

In rejecting claim 1, the Examiner maintains that column 4, lines 33-64, column 6, lines 4-25, and column 16, lines 5-30 of Leslie teaches the requirement for wherein the upstream system and the downstream system apply the same mobile telephone standard, which is that of the public mobile telephone network, as required by claim 1. (*See* pgs. 2-3 of the Office Action). Contrary to the assertion of the Examiner, neither the cited portion nor any other portion of Leslie teaches this feature of claim 1.

In contrast to the requirements of claim 1, column 4, lines 33-64 of Leslie merely discloses a frequency translating repeater 110 which allows terminals of a first communication system having a first air protocol to communicate with terminals of a second communication system having a second air protocol where the first and second air protocols differ in operating frequency. (*See also* Abstract; Col. 7, lines 51-56; & FIG. 1 of Leslie). As an example, Leslie describes that the frequency translator repeater 110 receives signals transmitted by an 800 MHz TDMA base station 114 of cellular system 112 and linearly translates the frequency of the

signals to the 1.9 GHz band for retransmission to 1.9 GHz mobiles 118 of a 1.9 GHz TDMA PCS system 242. The frequency translating repeater 110 may also receive signals transmitted by the 1.9 GHz mobiles 118 and linearly translates the frequency of the signals to the 800 MHz band for retransmission to the 800 MHz TDMA base station 114.

Moreover, column 6, lines 4-25, and column 16, lines 5-30 of Leslie simply describes that a repeater 210 is utilized to enable subscriber terminals (e.g. 800 MHz subscriber terminals 116) of a first communication system, having a first air protocol (e.g. 800 MHz TDMA cellular system 112) to communicate with subscriber terminals (e.g. 1.9 GHz subscriber terminals 218) of a second communications system having a second air protocol which is incompatible or different from the first air protocol (e.g. 1.9 GHz GSM PCS system 242). (*See also* Abstract; Col. 7, lines 56-60; & FIG. 2 of Leslie).

In view of the preceding discussion, the first and second communication systems taught by Leslie differ in (1) frequency or (2) air protocols. (*See* Abstract). As such, the first and second communications systems taught by Leslie are not the same. Leslie therefore does not teach and is incapable of suggesting that the upstream system and the downstream system apply the same mobile telephone standard, which is that of the public mobile telephone network, as claimed. Accordingly, the cited references do not disclose, teach or otherwise suggest all of the features of claim 1 for at least this reason.

Claim 1 also recites a service signal converter module adapted to extract from the signaling information specific to the mobile telephones belonging to the private network and used to manage calls between the terminals of the private network and store that information in a

local database. The Examiner correctly concedes that Leslie fails to disclose this feature of claim 1. However, the Examiner takes the position that Tanaka makes up for the deficiencies of Leslie. (See pg. 3 of the Office Action). Specifically, the Examiner maintains that column 1, lines 10-15, column 20, lines 58-67, and column 22, lines 27-32 of Tanaka teaches the requirement for a service signal converter module adapted to extract from the signaling information specific to the mobile telephones belonging to the private network and used to manage calls between the terminals of the private network and store that information in a local database, as claimed. To the contrary, Applicant submits that there is no disclosure or suggestion in the cited portion nor any other portion of Tanaka teaching this feature of claim 1.

In contrast to the requirements of claim 1, Tanaka is directed to a digital key telephone system connected to an analog public network NW having a function of transmitting a ringing signal including identification information of a calling line through a subscriber line (CO line). (See Abstract). According to the disclosure of Tanaka, the digital key telephone system disclosed therein “comprises a main unit (KSU) 1 connected to [the] analog public network (PTSN) through [the] subscriber line (CO line),” and landline telephones such as digital key telephones (DKTS) 2 (See FIG. 10 of Tanaka) and standard telephone (STT) 4 are connected to the main unit (KSU) 1 via “extension lines as extension terminals.” (See Col. 12, lines 34-39 & FIGS. 1-2 of Tanaka) (emphasis added). Since the digital key telephones (DKTS) 2 and the standard telephone (STT) 4 are physically connected to the main unit (KSU) 1 via extension lines, as shown in Figures 1-2 of Tanaka, the digital key telephones (DKTS) 2, and the standard

telephone (STT) 4 taught by Tanaka are landline telephones. As such, Tanaka does not disclose or suggest the claimed mobile telephones belonging to the private network, as recited in claim 1.

Moreover, column 20, lines 58-67 of Tanaka simply teaches that a “caller ID transmitted from the analog public network NW,” is received by a calling identification information interface unit (RCIU) (12) of the main unit (KSU) 1. (emphasis added) (*See* FIG. 2 of Tanaka). The RCIU 12 transfers the caller ID transmitted from the analog public network, to a control unit (RCTU) 16 of the main unit (KSU) 1, which extracts information such as calling line name and calling line number so that a landline telephone such as a digital key telephone (DKTS) 2 or the standard telephone (STT) 4 displays the calling line name. Col. 21, lines 61-62.

Given that Tanaka suggests that the caller ID is transmitted from a phone belonging to the analog public network NW and received by the main unit (KSU) 1, and since Tanaka does not disclose or suggest the use of mobile telephones belonging to a private network, Applicant submits that Tanaka does not teach and is incapable of suggesting a service signal converter module adapted to extract from the signaling information specific to the mobile telephones belonging to the private network and used to manage calls between the terminals of the private network and store that information in a local database, as required by claim 1. Accordingly, Applicant submits that the combination of cited references do not teach all of the features of claim 1 for this additional reason.

Additionally, claim 1 recites telecommunication equipment for setting up local telephone connections between at least one mobile telephone, belonging to only a private network, and a public network. The Examiner correctly concedes that the combination of Leslie and Tanaka

does not teach a private network and fails to disclose the above feature of claim 1. However, the Examiner relies on Evans to make up for the deficiencies of Leslie and Tanaka. (*See* pg. 4 of the Office Action). Particularly, the Examiner suggests that column 3, lines 33-43, 65-68, column 4, lines 1-12, and Figure 1 of Evans teaches telecommunication equipment for setting up local telephone connections between at least one mobile telephone, belonging to only a private network, and a public network, as claimed. Contrary to the Examiner's assertion, Applicant respectfully submits that neither the cited portion nor any other portion of Evans teaches this feature of claim 1.

Instead, Evans relates to an apparatus which allows subscriber units (e.g. portable subscriber unit M1, and mobile subscriber unit M2) to operate within a public cellular system C2 having an overlapping coverage area of a private cellular system C1. (*See* Col. 1, lines 8-12; Col. 2, lines 11-15; & FIG. 1 of Evans). More particularly, Evans describes that when the subscriber units (e.g. M1, M2) are within the coverage area of the private cellular system C1, the subscriber units are serviced from the private radio telephone system C1 and when the subscriber units move into the coverage area of the public cellular system C2, the subscriber units are serviced from the public radio telephone system C2. (*See* Col. 2, lines 58-68; Col. 3, lines 49-52; & Col. 6, lines 1-4 of Evans). Since Evans discloses that the subscriber units operate in both a private cellular system C1 and a public cellular system C2, the subscriber units of Evans do not belong to only a private network, as required by claim 1. Evans therefore does not disclose, teach, or suggest telecommunication equipment for setting up local telephone connections between at least one mobile telephone, belonging to only a private network, and a public

network, as claimed. Applicant respectfully submits that the combination of cited references do not teach or suggest all of the features of claim 1 for this additional reason.

Applicant submits that an artisan of ordinary skill would not (and could not have) combined the applied references in the manner suggested by the Examiner to produce the subject matter of claim 1. Accordingly, the Examiner's proposed combination of the applied references do not teach all of the features of claim 1, as discussed above, and cannot be said to render claim 1 obvious within the meaning of 35 U.S.C. § 103. Applicant therefore respectfully requests the Examiner to reconsider and withdraw the rejection of independent claim 1 and its dependent claims 2-13.

Claim 5

Concerning claim 5, Applicant submits that claim 5 recites independently patentable subject matter since the cited references do not teach, suggest, or provide the motivation for telecommunication equipment comprising means for choosing the modules used which are controlled in accordance with a criterion related to a contract of the user, as claimed. The Examiner relies on column 4, lines 52-67, and column 5, lines 1-11 of Leslie as teaching this limitation. However, the cited portion of Leslie simply describes that a first translation means receives signals transmitted by a base station in the 800 MHz band and linearly translates the signals to a 1.9 GHz band for retransmission to 1.9 GHz mobiles. Similarly, the cited portion describes that a second translation means receives signals transmitted by mobiles in the 1.9 GHz band and linearly translates the signals to the 800 MHz band for retransmission to an 800 MHz base station. Nowhere in the cited portion or any other portion of Leslie is there any disclosure

or teaching relating to choosing modules controlled in accordance, criterion related to a contract of a user, as required by claim 5. For this additional reason, Applicant respectfully requests the Examiner to reconsider and withdraw the § 103(a) rejection of claim 5.

Claim 6

Concerning claim 6, Applicant respectfully submits that claim 6 is independently patentable given that the cited combination of references fails to teach, suggest or provide the motivation for telecommunication equipment wherein the converter comprises means for detecting, by means of a database, that the user of a mobile telephone terminal has a contract with the GSM public network and for carrying out transfer without using any of the subscriber resources of the downstream system, as claimed. The Examiner asserts that column 24, lines 30-54 of Leslie teaches the features of claim 6. However, the cited portion of Leslie, merely describes that a registration database 690 allows a repeater 210 to minimize traffic on control channels by transmitting pages from 800 MHz TDMA cellular base station 114 destined for mobiles such as the 1.9 GHz GSM PCS mobiles 218 which can be serviced by the repeater 210. Applicant submits that there is no disclosure or suggestion in the cited portion or any other portion of Leslie that the database 690 detects that a user of a mobile (such as mobile 218) has a contract with a GSM public network, as claimed. Moreover, the cited portion of Leslie describes that “[t]he link manager processor 550 ... [consults] the database [690] to determine” which pages sent by 800 MHz mobiles 116 and received from the 800 MHz TDMA cellular base

station 114 via channel 120 (which the Examiner alleges is a “downstream link” in rejecting claim 1)¹ “should be forwarded to 1.9 GHz GSM PCS mobiles 218.”

Assuming *arguendo* that a page transmitted from 800 MHz TDMA cellular base station 114 and antenna 128 via channel 120 is a “downstream link” as contended by the Examiner, Leslie suggests the use of subscriber resources corresponding to users of 800 MHz mobiles 116 on the downstream system for carrying out transfer of the page to the user of a 1.9 GHz GSM PCS mobile 218. Accordingly, Leslie does not disclose and is incapable of suggesting telecommunication equipment, wherein the converter module comprises means for carrying out transfer without using any of the subscriber resources of the downstream system, as claimed.

Applicant therefore respectfully requests the Examiner to reconsider and withdraw the § 103(a) rejection of claim 6 for this additional reason.

Claim 13

Regarding claim 13, Applicant submits that claim 13 is independently patentable given that the cited references do not teach, disclose or provide the motivation for telecommunication equipment wherein said information stored in the local database comprises, *inter alia*, an encryption key, an authentication key, a result of a calculation performed in the public network to authenticate a user, and an identity of algorithms used for encryption and authentication, as claimed. The Examiner refers to column 24, lines 24-29 and column 28, lines 34-37 of Leslie to teach this limitation. The cited sections of Leslie merely describes that a mobile registration database 690 may allow a repeater 210 to monitor mobiles that are present in the repeater 210

¹ See pgs. 2 & 7 of the Office Action.

coverage area and which can be serviced by the repeater 210. There is no disclosure or teaching in Leslie that the database 690 stores information such as an encryption key, authentication key, a result of a calculation performed in the public network to authenticate a user, and an identity of algorithms used for encryption and authentication, as claimed. Applicant therefore respectfully requests the Examiner to reconsider and withdraw the § 103(a) rejection of claim 13 for this additional reason.

III. New Claims

Applicant has added new claims 14-16 in order to more fully cover various aspects of Applicant's invention as disclosed in the specification. In addition to their dependencies from claim 1, Applicant respectfully submits that claims 14-16 should be allowable because the cited references do not teach or suggest the limitations of these claims.

IV. Conclusion

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

AMENDMENT UNDER 37 C.F.R. § 1.111
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